

AMENDMENTS TO THE SPECIFICATION

Please add the following new paragraphs beginning on page 3, line 5:

FIGURE 6A is a logic table for the all-optical flip-flop of FIGURE 6.

FIGURE 6B is a diagram illustrating the logic gates for the all-optical flip-flop of FIGURE 6.

Please add the following new paragraph beginning on page 3, line 11:

FIGURE 10 is a plan view showing a waveguide part of an all-optical flip-flop of the first embodiment.

Please amend the paragraph beginning on page 10, line 16, as follows:

Moreover, in each of the aforementioned embodiments, saturable absorption regions (SA) are provided at the input ports, but these may also be provided at the output ports. In this case, also, the theory of operation is the same as described above. FIGURE 10 illustrates saturable absorption regions 34 in non-inverting output port 331 and inverting output port 332.